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REMARKS

In the application, claims 1 -10 are pending and rejected. After due consideration of the Examiner's comments, the pending claims have been amended to more clearly set forth what is regarded as the invention. Reconsideration of the claims as amended is respectfully requested.

Rejections under §112

The Examiner rejects claims 2, 6 & 10 under 35 U.S.C. §112, 1st paragraph, as failing to comply with the written description requirement. In particular, the Examiner cites the limitation of an edible food comprising the microclustered water in combination with non-food material.

The limitations relating to non-food material have been deleted.

The Examiner rejects claim 1 under 35 U.S.C. §112, 2nd paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. In particular, the Examiner identifies the phrase "ingredient and product" and suggests that the language be changed to "ingredient or product".

This suggested change has been incorporated into the claims.

Rejections under §102

The Examiner rejects claims 1-10 under 35 U.S.C. §102(b) as being anticipated by Kawashima (U.S. Patent No. 5,882,706).

The claims have been amended to specify that the microclustered water is produced by a cavitation process using purified water without additives and that the water has a conductivity of about 3.0 to 4.0 $\mu\text{mhos/cm}$. The fact that the microclustered water of the present invention is made without additives is an important aspect of the invention. (As described in the specification at page 27, the microclustered water had a conductivity much less than that of reverse osmosis water.)

Kawashima produces his water by treating it with a ferrosiferrous salt, i.e., a magnetic material, which presumably serves as a nucleus around which the minute clusters form and provides a magnetic quality to the food item made with the water. The presence of a metal or metal salt in the water, even purified water, will obviously result in a much higher conductivity

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than that of purified or reverse osmosis water. According to the present invention, the microclustered water is produced by a process that uses no impurities and, therefore, the water is highly purified; more so than it could be if additives were used. Since one feature of the highly purified water is its relatively low conductivity, it is submitted that Kawashima does not teach each and every element of the invention. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection under §102(b).

Rejections under §103

The Examiner rejects claims 1-3, 5-6 and 9-10 under 35 U.S.C. §103(a) as being unpatentable over Susumu et al.

As with Kawashima, Susumu et al. disclose a microcluster water that is produced by introduction of an additive. Susumu et al. describe a method for making a micro-cluster water that requires a nucleus for formation of the micro-clusters. The nuclei must have a charge and are selected from a list of compounds that are known in the art to facilitate the formation of water “clusters” around their charge. Once the water is combined with the nucleating material, it is exposed to a magnetic or electric field which is alleged to separate the water clusters from each other. The primary example provided in Susumu et al. is humic acid, which is well known to have a high cation exchange capacity. Humic acid is commonly used to chelate plant nutrients, allowing them to be more easily absorbed by a plant’s root. Since water is electrically neutral in its normal state, an additive such as humic acid must be mixed into the water so that the molecular groups in the water mixture have an electric charge that makes them susceptible to the magnetic or electric field that is applied to the water to produce the micro-clusters. To be susceptible to an electric or magnetic field, the water must also be capable of carrying a charge, such that the conductivity would be higher than purified water, and higher than the conductivity of the water as claimed.

In the primary example provided by Susumu et al., the water is described as 0.03% humic acid (by weight) and 99.97% water (by weight). The test example in Susumu et al. describes improved seed germination with the micro-cluster water made using humic acid, however, the effects of humic acid on seed germination are well known. Humic acid is known to improve both germination rate and yield. Thus, it is possible that the presence of humic acid, and not the

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creation of micro-clusters, is the reason for the reported improvements in tomato seedling growth.

In contrast, the microcluster water in the present application introduces no additives to the liquid to produce the microclusters and, thus, has a higher purity and much lower conductivity. The processing alone, using cavitation and pressure differentials, breaks the large molecule matrices in the input liquid into smaller clusters. The liquid is pure, without requiring a nucleus-forming additive that has an electrical potential different than that of the liquid. Accordingly, it would not be obvious from Susumu et al. to provide an edible product made using microcluster water that has no additives and has the low conductivity as recited in the claims.

The Examiner also rejects claims 1-10 under 35 U.S.C. §103(a) as being unpatentable over Susumu et al. in view of Kawashima.

For the reasons set forth above, it is submitted that neither reference teaches or suggests the invention as recited in the amended claims.

It is respectfully submitted that the foregoing amendments and comments have addressed and overcome all of the grounds for objection and rejection. Therefore, Applicants request that the Examiner withdraw the rejections and issue a notice of allowance of all claims in the application.

Should the Examiner believe that prosecution of this application might be expedited by further discussion of the issues, he she is invited to telephone the undersigned attorney for Applicants at the telephone number indicated below.

Respectfully submitted,



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